

## In the Specification

Please replace paragraph [0002] with the following amended paragraph:

[0002] This application claims priority [[on]] of U.S. Provisional Patent Application Serial No. 60/409,728 (~~HAMK-26,177~~) entitled “System and Method for Security Management Decision Analysis,” filed September 11, 2002 and US Provisional Patent Application Serial Number 60/407,550 (~~HAMK-26,170~~) entitled “System and Method for Service Management Decision Analysis,” filed August 30, 2002.

Please replace paragraph [0009] with the following amended paragraph:

[0009] Current security systems and methods exhibit several problems. These problems include a lack of process integration, a lack of tool interoperability and a lack of cross domain integration. The current systems tend to overemphasize technical countermeasures. They tend to underestimate the operational requirements necessary to implement recommended solutions. Current ~~system~~ systems tend to ignore or undervalue qualitative data and otherwise don't take qualitative or uncertain data into account. They usually lack a life-cycle model for security. They typically [[don't]] do not integrate with service management methods. The analytical models used in current security system are typically limited to risk metrics.

Please replace paragraph [0021] with the following amended paragraph:

[0021] A decision group server 110 may create and access its own super-matrix 106a, although in a given decision analysis, the facilitators super-matrix will typically control the processes. The decision group server 110 may access one or more databases 114a or other information sources. The decision group server may be provided with decision frames 116 as well as other decision tools 118. The decision tools 118 may include multi-criteria decision analysis (MCDA) 120, including analytical network processing (ANP) 130, ~~bayesian belief~~ Bayesian Belief networks (BBN) 122, 6 sigma 124, mean time between failures (MTBF) 126, queuing models 128, and any other analytical tool. The specific tools are chosen as appropriate

to the specific question given. For example, 6 sigma 124 and MTBF 126 are most appropriate to discrete questions and so could be applied where specific discrete questions are raised.

Please replace paragraph [0043] with the following amended paragraph:

**[0043]** Like any complex issue needing resolution, security management needs to be broken down into more manageable components and enhanced. An architectural discipline is necessary to standardize the approach to instrumenting the process with measurement points and tying that to a common security management architecture.[[.]] Managing security requires a set of core processes supported by group decision analysis across multiple business and technical domains.

Please replace paragraph [0048] with the following amended paragraph:

**[0048]** A system management decision analysis system 100 and process may be implemented for designing, optimizing and managing any system ~~process~~ process. The principles of the preferred embodiment however are not limited to IT Security management and can be applied to nearly all disciplines including service management, resource management, asset management, physical security, governmental and military security, corporate security and other areas.

Please replace paragraph [0057] with the following amended paragraph:

**[0057]** The security management decision analysis system 100 including the facilitator 102 and the decision groups 110 use a combination of multi-criteria decision analysis 120 and Bayesian Belief networks (BBN) 122 to represent a network of decision criteria. This combination of analytical techniques facilitates complex representation and adaptive combinations of empirical and or subjective and or uncertain data and related models. The decision analysis system 100 handles multi-criteria decision forward and feedback analysis, conflicting objectives, subjective ~~judgements~~ judgments and uncertain data. Moreover the decision analysis system 100 facilitates a systematic and adaptable group and or individual

decision making process to prioritize, recommend and monitor specific actions.

Please replace paragraph [0070] with the following amended paragraph:

**[0070]** The decision analysis system 100 calculates values, within some probability bounds in the case of the uncertain criteria, for each criterion for a given action. This allows the decision analysis system 100 to apply Analytical Network Process 130 techniques to combine the values for a given action and then to rank the set of actions. In the case of the uncertain criteria the decision ~~analysis system 100~~, analysis system 100, for example, may apply values for 'most likely' as well as the upper and lower bounds. If the result of the analysis produces a unique 'best' ~~action~~ action, which satisfies all of the defined ~~constraints~~ constraints, then a final decision recommendation is generated. If not, the decision analysis system 100 relaxes various constraints or ~~introduce~~ introduces new actions before beginning the process again for an additional round of analysis.